The Rise of "Solar as Baseload"

From Intermittent Generation to 24/7 Dispatchable Energy Systems

The global energy transition is entering a decisive phase. For decades, renewable energy—particularly solar—has been constrained by its intermittency, limiting its role to supplementary generation rather than a primary power source. A structural shift is now underway: the rapid decline in battery storage costs, particularly Lithium Iron Phosphate (LFP) technologies, is enabling Solar-Plus-Storage (S+S) systems to evolve from peak-shaving solutions into fully dispatchable energy assets.

This transformation allows solar energy to move beyond variability and begin functioning as "mid-merit" and even "baseload" power, directly competing with traditional thermal plants such as natural-gas combined-cycle (NGCC) plants. Forward-looking energy producers and investors now face a strategic inflection point: **How do you design, optimize, and operate Solar-Plus-Storage systems that deliver reliable, 24/7 energy—while maximizing long-term economic value?**

⚡ 24/7 Dispatchable Energy

Reliable renewable output around the clock

📉 Reduced LCOS

Lower Levelized Cost of Storage through optimized systems

💰 Stable Revenues

Inflation-protected, predictable energy income streams

🌍 Lower Carbon Intensity

Displacing thermal generation with clean baseload power

Fortis & Peak
Shaping What's Next

The Strategic Challenge

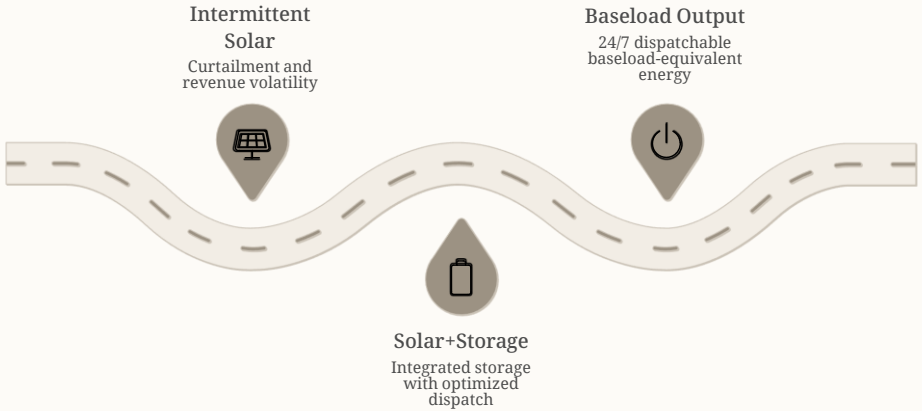
The Core Problem

Traditional solar generation is inherently intermittent. Without the ability to store and dispatch energy on demand, solar assets cannot compete with firm, dispatchable thermal generation. The result: curtailment, revenue volatility, and limited grid reliability.

The organization could generate renewable energy—but could not reliably deliver it as a firm, baseload-equivalent resource.

Key Barriers to Dispatchability

- Intermittent solar generation with limited dispatchability
- Difficulty matching supply with real-time demand profiles
- Complex sizing and optimization of storage systems
- Market uncertainty around capacity credit and pricing mechanisms
- Lack of integrated systems to manage generation, storage, and dispatch



The path from intermittent generation to firm, dispatchable power requires a disciplined architecture spanning intelligence, orchestration, and execution—precisely the challenge that the 3D&S framework, NEXORA™, and PeakFlow OS™ are engineered to solve.

Transformation Powered by 3D&S

Fortis & Peak's proprietary **3D&S execution framework**—Define, Design, Deliver, Sustain—provides the structured methodology to transform solar assets into fully dispatchable energy systems. Each phase is powered by NEXORA™ intelligence and PeakFlow OS™ orchestration.

1

DEFINE

Using NEXORA™, Fortis & Peak analyzed solar generation profiles, evaluated demand curves and grid requirements, assessed LFP storage technologies and cost structures, and modeled LCOE and LCOS scenarios. **Outcome:** Clear understanding of how solar + storage can meet baseload requirements.

2

DESIGN

Engineered an optimized S+S architecture including precise battery sizing and duration modeling (4–12+ hour storage), hybridization strategies, dispatch algorithms for load matching, and integration with grid markets and capacity mechanisms. **Outcome:** Transition from intermittent solar to a dispatchable energy system.

3

DELIVER

Leveraging PeakFlow OS™ as the orchestration layer, execution enabled real-time energy dispatch, dynamic optimization of charging/discharging cycles, and integration with grid operators and energy markets. **Outcome:** A fully operational, dispatchable renewable energy system.

4

SUSTAIN

Continuous optimization of dispatch strategies, real-time monitoring of performance and degradation, revenue stream optimization across energy sales and capacity markets, and alignment with long-term decarbonization and ESG goals. **Outcome:** A resilient, inflation-protected, and scalable energy platform.

Core Platforms in Action

The Solar-as-Baseload transformation is enabled by three tightly integrated proprietary platforms. Together, they form a complete intelligence, orchestration, and execution stack—spanning from predictive analytics to real-time grid dispatch.

NEXORA™

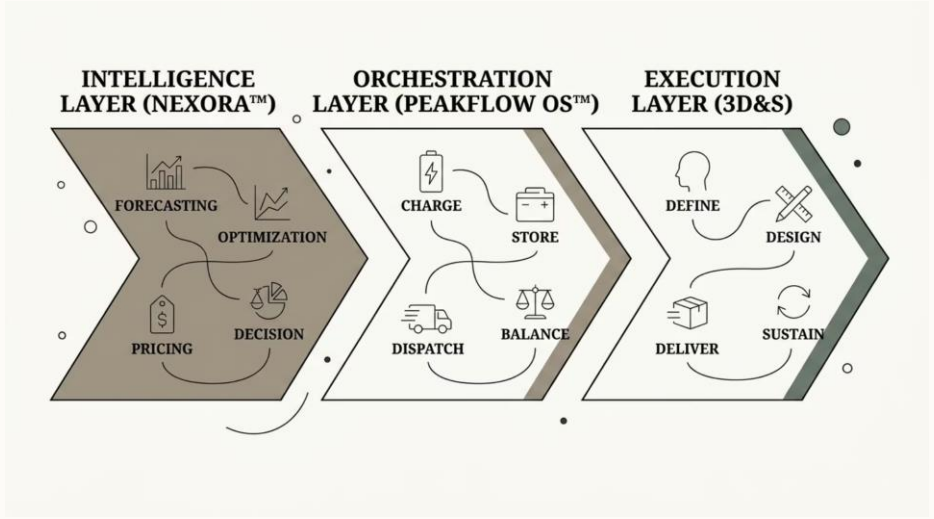
Energy Intelligence & Optimization Engine. Models generation, storage, and demand scenarios. Optimizes system sizing and economic performance. Enables predictive analytics for energy dispatch and pricing—turning raw data into actionable dispatch intelligence.

PeakFlow OS™

Real-Time Energy Orchestration Platform. Coordinates generation, storage, and grid interaction in real time. Optimizes charging, discharging, and dispatch decisions. Ensures continuous alignment with demand signals and market pricing to maximize revenue and reliability.

3D&S Framework

Execution-Driven Transformation Methodology. Define variability and economic opportunity. Design optimized S+S systems. Deploy integrated generation and storage infrastructure. Sustain continuous performance optimization and long-term returns.



Measurable Impact & Strategic Positioning

Dispatchable Renewables

Full transition from intermittent to 24/7 dispatchable renewable energy output

Fossil Fuel Displacement

Reduced reliance on fossil fuel-based baseload and thermal generation

Financial Stability

Predictable energy output delivering inflation-protected, long-term asset value

Market Competitiveness

Enhanced positioning in capacity and energy markets with bankable returns

> "The future of energy is not just renewable—it is dispatchable, predictable, and engineered to perform like baseload power."

Fortis & Peak is uniquely positioned at the intersection of energy intelligence, real-time orchestration, and execution-driven transformation. As the creator of NEXORA™, owner of PeakFlow OS™, and developer of the 3D&S methodology, the firm transforms renewables into bankable, baseload-equivalent assets—enabling next-generation energy systems and infrastructure at scale.

Strategic Capabilities

01

Creator of NEXORA™ — energy intelligence and optimization platforms

02

Owner of PeakFlow OS™ — real-time energy orchestration systems

03

Owner of 3D&S — execution-driven transformation methodology

04

Leader in enabling next-generation energy systems and infrastructure

Get in Touch

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